Abstracts

U-Band MMIC HBT DRO

S. Chen, S. Tadayon, T. Ho, K. Pande, P. Rice, J. Adair and M. Ghahremani. "U-Band MMIC HBT DRO." 1994 Microwave and Guided Wave Letters 4.2 (Feb. 1994 [MGWL]): 50-52.

A 46.3 GHz dielectric resonator stabilized oscillator (DRO) using AIGaAs/GaAs heterojunction bipolar transistor (HBT) and monolithic microwave integrated circuit (MMIC) technology has been designed, fabricated, and characterized. The oscillator exhibits 2.6 dBm output power with 5.870 dc-to-RF efficiency and less than -132 dBc/Hz phase noise at 5 MHz offset from the carrier. To our knowledge, this is the highest frequency oscillator ever reported using HBT devices and MMIC technology.

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